U.S. Environmental Protection Agency
Region 5

STATEMENT OF BASIS
R & D CHEMICAL COMPANY
Johnsville, Ohio
OHD080930050

INTRODUCTION

This Statement of Basis for the former R & D Chemical Company explains the process for cleaning up contaminated soils and explains the reasons for the cleanup proposal identified in this Statement of Basis. The U.S. Environmental Protection Agency (U.S. EPA) is issuing this Statement of Basis as part of its public participation responsibilities under RCRA.

This document summarizes information that can be found in greater detail in the Administrative Record for this facility. The U.S. EPA and the State of Ohio E.P.A., which directed the closure of regulated units at the facility, encourage the public to review these documents in order to gain a more comprehensive understanding of the facility and the RCRA activities that have been conducted there.

PROPOSED REMEDY

The U.S. EPA in conjunction with the Ohio EPA is proposing the following remedy to address the contaminated soils at the R & D Chemical facility:

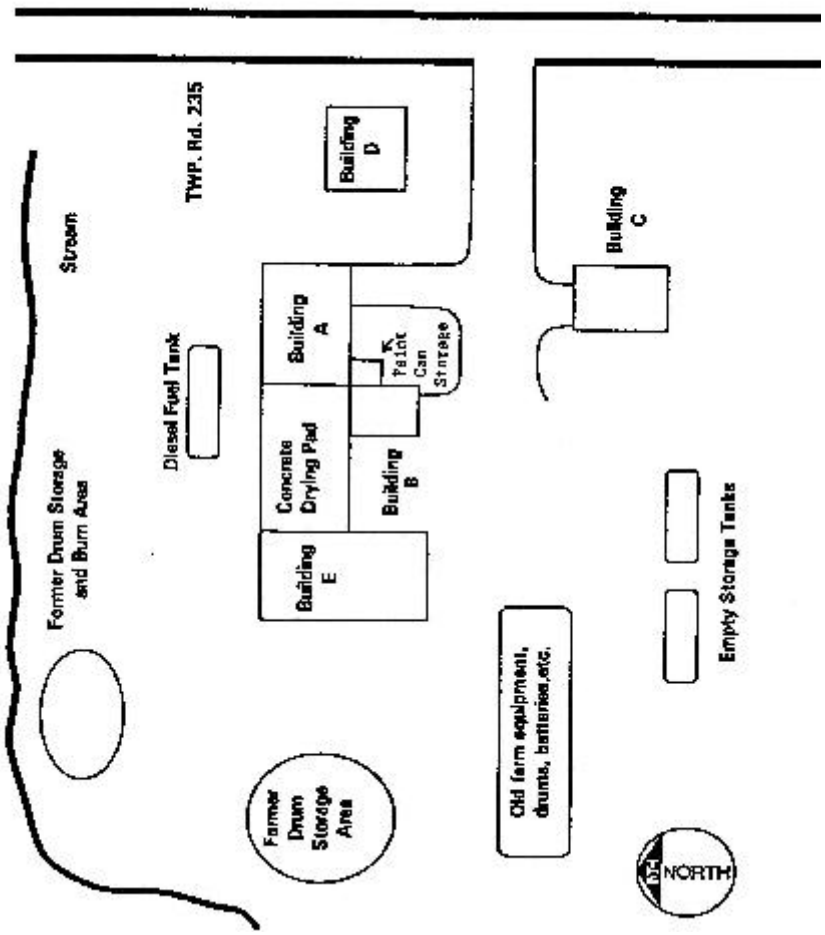
- No further action

A more detailed discussion of the proposed remedy is included below.

FACILITY BACKGROUND

Between 1978 and 1988, the R & D Chemical Company operated an unpermitted treatment and storage facility of electroplating waste on a portion of the Cunningham Farm, located just outside of Johnsville Ohio. A patented process (RD2000) was utilized. The treatment/recycling process used a barium product (RD343) to precipitate chromium, cadmium, nickel and cyanide from electroplating rinse waters (the patented RD2000 process). These rinse waters were returned to the plating rinse tanks, and the sludge (RD344 - contained in metals canisters) was taken back to R & D. The wastes were then placed in certain buildings, on an outdoor concrete pad, or on land areas. In addition, paint and other volatile wastes were stored in paint can storage areas. During facility operations, soils at the facility were contaminated with hexavalent chromium, a known human carcinogen, as well as with nickel, cadmium, barium and volatile organic compounds. Three monitoring wells were placed on the site and the groundwater in each was tested for both metal and organic chemicals, but no contamination was found.

FACILITY MAP - R & D CHEMICAL COMP ANY



SUMMARY OF FACILITY RISKS

During the site assessment of R& D Chemical, an analysis was conducted by the Ohio Environmental Protection Agency (OEPA) to estimate human health risks that could result if soils were not cleaned up. This analysis is commonly referred to as a baseline risk assessment. Since the owners of the Cunningham Farm, on which the R & D was located, wish to continue to operate the land as a farm, and use the property for strictly residential purposes, they wish to assess human health risk based on a residential land use scenario. As such, soil removals have taken place to abate high levels of Barium, Chromium, Cadmium, Nickel and volatile organic compounds.

Prior to cleanup and removal of soils in the areas of concern at the former R & D Chemical facility, soil sampling and chemical analysis yielded chromium levels which exceeded 1300 parts per million (ppm) and barium as high as 4500 ppm in some locations. These levels were far too high to allow residential land use.

Soil removals were then undertaken in Drum Storage Area #1, Paint Can Storage Area #2 and around the vicinity of the concrete drying pad. (See Facility Map). Subsequent to these soil removals, the following are the highest levels (ppm) or unit specific 95th upper confidence limits and locations for each chemical of concern:

Barium	192 ppm	South End of Drying Pad
Chromium*	56 ppm	Drum Storage Area #1
Cadmium	1.32 ppm	Drum Storage Area #1
Nickel	50 ppm	Drum Storage Area #1
Cyanide	No Detects	
Volatile Organics	Insignifcant to the risk assessment	Throughout the Facility

*For the purposes of human health risk assessment, the chromium is assumed to be completely composed of Chromium +6, a known human carcinogen.

At these levels, the facility easily passes a baseline risk assessment for residential land use.

SCOPE OF CORRECTIVE ACTION

The scope of this corrective action was to:

1) Identify the highest areas of contamination, and remove them by soil excavation, and,

2) Place ground water monitoring wells in strategic locations both upgradient and downgradient of contaminated areas, and ascertain if groundwater was impacted by facility operations.

Subsequent to sampling and analysis, the groundwater was found not to be contaminated, and the wells were abandoned. Over the course of the project, over 46 tons of contaminated soil were removed from the facility.

This purpose was fully achieved through the combined efforts of the US EPA and the Ohio EPA.

SUMMARY OF ALTERNATIVES

It was the desire of the farm owners to use the land for residential purposes and have no future restrictions. Since all the contaminated soil was removed, no other alternatives required evaluation and no further action is warranted at the site.

Removal of contaminated soil served to eliminate the toxicity, mobility and volume of the hazardous waste, and reduce human health risks to well below U.S. EPA Region 5 Human Health Data Quality Levels for dermal contact, inhalation and ingestion for hexavalent chromium, nickel, cadmium and cyanide.

PUBLIC PARTICIPATION

The US EPA solicits input from the community on the cleanup method chosen. The US EPA has set a public comment period of **11/28/2003** through **1/15/2004**, to encourage public participation in the cleanup process. If significant comments are received, a Public Meeting will be arranged, at which US EPA will present this Statement of Basis, answer questions, and accept both oral and written comments. Written comments can be addressed to:

Project Manager, R&D Chemical Facility
U.S. EPA Region 5
77 W. Jackson, DE-9J
Chicago, Illinois 60604

All public comments received during the public comment period will be answered in writing.

The reports and this Statement of Basis for R & D Chemical is available at:

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